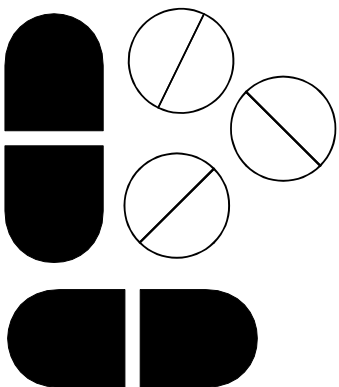




Diet Supplements for Livestock— Protein, Vitamin A and Minerals



Protein

Most grain rations for cattle and sheep supply adequate protein to maintain a satisfactory 10% to 12% level. However, when livestock in emergency feeding situations are fed mostly low-protein materials such as ground ear corn, grain straws or grass straws, a protein supplement is needed.

About 1 lb of 20% to 30% protein supplement/head/day is recommended. Use cost comparisons to get the best protein supplement for your money. (Compare cost per pound of protein supplied, rather than cost per ton of the supplement.) Different supplements contain the following protein levels:

Alfalfa seed screenings	25%
Field or cull peas	20%
Linseed meal	30–36%
Cottonseed meal	40–47%*
Soybean meal	44–49%*

*Level specified by manufacturer

Urea can replace part of the protein if its price is favorable. One pound of feed grade urea equals 2.62 pounds of crude protein. Never feed urea to poultry or swine. Urea in high levels is toxic to livestock. Do not feed urea at levels greater than 1% of a total ration (grain and hay) or 3% of a concentrate mix.

Give hungry livestock a fill of feed without urea before turning them onto feed which contains urea. Mix urea thoroughly with the feed and use it with an available energy source such as grain or molasses. Do not feed urea with roughage alone.

Molasses is occasionally an economical energy source, but must be fed with some dry feedstuffs. Liquid molasses can be self-fed if

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you use a wooden float device to restrict consumption, or it can be mixed with grain at a feed mill.



Vitamin A

Hay supplies most necessary Vitamin A during winter feeding. If hay is eliminated from the ration, Vitamin A supplements may be necessary. A number of stable, dry forms of Vitamin A are available commercially. These may be mixed with feed, with salt, or injected intra-rumenally.

The following daily levels of Vitamin A are suggested:

Bred cows or mature cattle	20,000 I.U.
Yearling cattle	10,000 I.U.
Bred ewes	5,000 I.U.
Milking cows	40,000 I.U.

Minerals

Removing hay from livestock rations may cause mineral deficiency. To correct this problem, supplement grain rations with a free-choice mixture of one part dicalcium phosphate and one part trace mineralized salt.

No additional salt is needed with this mixture. Although hungry cattle may crave salt, limit the feeding of loose salt to $\frac{1}{10}$ lb per animal per day.

Cattle on limited water should do without salt or minerals for 3 or 4 weeks, or until adequate water is available.